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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/534,389	**Applicant(s)** PULLINI ET AL.	
	Examiner FATIMA N. FAROKHROOZ	**Art Unit** 2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *29-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 May 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/19/05*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objection

Claim 42 is objected to for lacking antecedent basis to claim 31 on which it is dependant. The electrodes in claim 42 are not claimed in claim 31. However H is described as terminals in claim 31 and as electrodes in claim 42. Appropriate corrections are needed. For purposes of art rejection it is deemed that the terminals in claim 31 are electrodes.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 39 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "sufficiently" in claims 39 and 41 is a relative term which renders the claim indefinite. The term sufficiently" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in

the art would not be reasonably apprised of the scope of the invention. Appropriate correction is needed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 29-41, 43-46, 48-50, 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levinson (US 5152870) , in view of McMaster et al (US 2077633) further in view of Richard (GB 2032173).

Regarding Claim 29, Levinson teaches : An emitter for incandescent light sources Fig. 1,2, col.2,lines 50-55) , capable of being brought to incandescence by means of-passage of electric current, wherein on at least one surface of the emitter (F) a micro-structure (R) is provided (col.3,lines 30-40,also see col.3,lines 57-69 wherein the filament 2 in Fig. 1,2 is made of tungsten) , operative to enhance absorbance for wavelengths belonging to the visible region of the spectrum.

Levinson does not teach that the emitter is characterized such that the micro-structure (R) is at least partly made of a material (Au) whose melting temperature is

lower than the operating temperature of the emitter (F) (also see col.3,lines 57-69 wherein the filament 2 in Fig. 1,2 is made of tungsten).

In the same field of endeavor, the added McMaster reference teaches an emitter that is at least partly made of a material **(Au, Gold,** see col.1,lines 35-50 wherein a conducting base made of gold is provided underneath the photo-electric surface) in order to achieve low resistance for the operation of the emitter (see col.1,lines 35-50).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the emitter surface, as disclosed by McMaster, in the device of Levinson in order to achieve low resistance for the operation of the emitter.

Further, the above combination does not teach that at least a substantial portion of the emitter (F), including said micro-structure (R), is coated with an oxide with high melting point (OR), such as a refractory oxide, said oxide being operative to preserve a profile of said microstructure (R) in case of deformation or change of state of the respective material (Au), consequent to the use of the emitter (F) at an operating temperature exceeding the melting temperature of said material (Au).

In the same field of endeavor, the added Richard reference teaches an incandescent lamp filament that is coated with an oxide with high melting point (OR), such as a refractory oxide (see page 1,lines 30-60) in order to suppress blackening of the lamp envelope during operation of the device (page 1, lines 83-95).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the filament , as disclosed by Richard, in the emitter of the previous combination in order to suppress blackening of the lamp envelope during operation of the device.

2. Regarding claim 30; the combined structure of Levinson, Mcmaster and Richard teaches An emitter , characterized in that said oxide (OR) is operative to preserve a profile of said microstructure (R) also from effects of evaporation of the respective material (W; Au; W, Au) at high operating temperature (see rejection in claim 29 above, the same reason to combine art as in claim 29 applies).

3. . Regarding claim 31; the combined structure of Levinson, Mcmaster and Richard teaches An emitter, characterized in that the emitter (F) is almost completely coated by said refractory oxide (OR), in particular with the exception of respective areas for connection to terminals (H) (see rejection in claim 29 above, the same reason to combine art as in claim 29 applies). Further, McMaster teaches terminals (electrodes 12 and 13 in Fig. 1,col.2,lines 10-33) connected to the emitter in order to operate the device.

4. Regarding claim 32, Levinson teaches An emitter, characterized in that said micro-structure (R) is made of a conductor, semiconductor or composite material (**W**; Au; W; Au) (see col.3,lines 57-69 wherein the filament 2 in Fig. 1,2 is made of

tungsten), whose optical constants, combined with the shape of the micro-structure (R), are such as to allow a higher luminous emission efficiency than a classic incandescence filament, said efficiency being defined as the ratio between the fraction or visible radiation emitted at the operating temperature in the interval 380 nm-780 nm and the fraction of radiation emitted at the same temperature in the interval 380 nm -2300 nm (see col.5,lines 42-60; also see Background of the invention in col.1,lines 10-65).

5. Regarding claim 33, the combined structure of Levinson, Mcmaster and Richard implicitly teaches An emitter, characterized in that said material (Au) is selected among conductor, semiconductor and composite materials whose melting point is lower than the operating temperature of the filament (F) (see rejection in claim 29 above, the same reason to combine art as in claim 29 applies).

6. Regarding claim 34, the combined structure of Levinson, Mcmaster and Richard implicitly teaches an emitter, characterized in that it is formed by at least a first layer of conductor material (W), melting at higher temperature than the operating temperature of the emitter (F), such as tungsten, and by a second layer of material (Au) selected among conductor, semiconductor and composite materials whose melting point is lower than the operating temperature of the emitter (F) (see rejection in claim 29 above, the same reason to combine art as in claim 29 applies).

7. Regarding claim 35, the combined structure of Levinson, Mcmaster and Richard teaches an emitter, characterized in that said micro-structure (R) is at least partly formed with **gold** (see rejection in claim 29 above, the same reason to combine art as in claim 29 applies).

8. Regarding claim 36, Richard teaches an emitter, characterized in that said refractory oxide (OR) is selected among ceramic base oxides, thorium, zirconium oxide (see col.1,lines 50-60 and on page 1 see (57); also see rejection in claim 29 above, the same reason to combine art as in claim 29 applies).

9. Regarding claim 37, Levinson implicitly teaches an emitter, characterized in that said micro-structure (R) is obtained by means of a superficial micro-structure of the emitter (F), i.e. in the same material which constitutes the emitter (F) (see col.1,lines 55-65; also see background of the invention in col.1, lines 5-65; see rejection in claim 29 above, the same reason to combine art as in claim 29 applies).

10. Regarding claim 38, the combined structure of Levinson, Mcmaster and Richard implicitly teaches an emitter, characterized in that said micro-structure comprises a diffraction grating (R), having at least one between a plurality of micro-projections (R1, R2) and a plurality of micro-cavities (C), where the dimensions (h, D) of the micro-

projections (R1, R2) or of the micro-cavities (C) and the period (P) of the grating (R) are such as to enhance the emission of visible electromagnetic radiation from the material (W; Au; W, Au) constituting at least the micro-structure (R), and/or reduce the emission of infrared electromagnetic radiation from the material (W; Au; W, Au) constituting at least the micro-structure (R), and/or enhance the emission of the infrared electromagnetic radiation from the material (W; Au; W, Au) constituting at least the micro-structure to a lesser extent with respect to the increase in visible emissivity (see rejection in claim 29 above, the same reason to combine art as in claim 29 applies; also see rejection in claim 32).

11. Regarding claim 39, the combined structure of Levinson, Mcmaster and Richard implicitly teaches an emitter, characterized in that said grating (R) is obtained with a first conductor material (W) melting at higher temperature than the operating temperature of the emitter (F), the first material having a structured part, a coating layer (Au) which covers at least the structured part of said first material (W), the coating layer being of a second material (Au) selected among conductor, semiconductor or composite materials melting at lower temperature than the operating temperature of the emitter (F), where the coating layer (Au) is sufficiently thin to copy the profile of the structured part of the first material (W), to form therewith said grating (R), and the second material (Au) has a greater emission efficiency than the first material (W), said efficiency being defined as the ratio between the fraction of visible

radiation emitted at the operating temperature in the interval 380 nm-780 nm and the fraction of radiation emitted at the same temperature in the interval 780 nm-2300 nm (see rejection in claim 29 above, the same reason to combine art as in claim 29 applies; also see rejection in claim 32).

12. Regarding claim 40, the combined structure of Levinson, Mcmaster and Richard implicitly teaches an emitter, characterized in that said grating (R) is obtained on the surface of a layer (Au) of a first conductor, semiconductor or composite material whose melting point is lower than the operating temperature of the filament (F), said layer (Au) is placed on a second conductor material (W) whose melting point is higher than the operating temperature of the emitter (F), where the first material (Au) has higher emission efficiency than the second material (W), said efficiency being defined as the ratio between the fraction of visible radiation emitted at the operating temperature in the interval 380 nm-780 nm and the fraction of radiation emitted at the same temperature in the interval 380 nm-2300 nm (see rejection in claim 29 above, the same reason to combine art as in claim 29 applies; also see rejection in claim 32).

As to the grounds of the rejection under section 103(a) with respect to claims 39 and 40, the function and/or use of

I) the coating layer (Au) sufficiently thin to copy the profile of the structured

part of the first material (W), to form therewith said grating (R), and the second material (Au) has a greater emission efficiency than the first material (W), said efficiency being defined as the ratio between the fraction of visible radiation emitted at the operating temperature in the interval 380 nm-780 nm and the fraction of radiation emitted at the same temperature in the interval 780 nm-2300 nm (For claim 39) and

II) where the first material (Au) has higher emission efficiency than the second material (W), said efficiency being defined as the ratio between the fraction of visible radiation emitted at the operating temperature in the interval 380 nm-780 nm and the fraction of radiation emitted at the same temperature in the interval 380 nm-2300 nm (for claim 40)

is considered to be the inherent characteristics of the device that meets the structural limitations.

13. Regarding claim 41, the combined structure of Levinson, Mcmaster and Richard implicitly teaches an emitter, characterized in that said grating (R) is obtained with a layer of refractory oxide (OR) having a structure part, a coating layer (Au) which covers at least the structured part of the layer of refractory oxide (OR), the coating layer being of a material (Au) selected among conductor, semiconductor or composite materials melting at lower temperature than the operating temperature of the emitter (F), where the coating layer (Au) is sufficiently thin to copy the profile of the structured part of the first material (W), to form therewith said grating (R), and where

the coating layer (Au) is in turn coated by an encapsulating layer constituted by refractory oxide (OR) (see rejection in claim 29 above, the same reason to combine art as in claim 29 applies; also see rejection in claim 31).

14. Regarding claim 43, Levinson teaches an emitter characterized in that the periodicity of the micro-projections (R1, R2) or of the micro-cavities (C) is of the order of the wavelength of visible radiation (see col.1,lines 55-65;see 0.15 and 0.35 micrometers; also see col.5,lines 26-42).

15. Regarding claim 44, Levinson teaches an emitter, characterized in that the periodicity of the micro-projections (R1, R2) or of the micro-cavities (C) is between 0.2 and 1 micron (see col.5,lines 26-42).

16. Regarding claim 45, Levinson teaches an emitter, characterized in that the height or depth of the micro-projections (R1, R2) or of the micro-cavities (C) is between 0.2 and 1 micron (see col.5,lines 26-42).

17. Regarding claim 46, Levinson teaches an emitter, characterized in that said micro-structure (R) is binary, i.e. with two levels (see Fig.1,2;the two levels correspond to the top and bottom of height h in Fig.2).

18. Regarding claim 48, Levinson teaches an emitter characterized in that the

micro-structure 5 (R) has a continuous projection (see projections 5 in Fig.2, col.3, lines 32-57 .Examiner Note: The examiner interprets continuous projection of the micro-structure as continuously projecting or going up continuously without any discontinuities (kinks) on the sides of the wall 5 in Fig.2).

19. Regarding claim 49, the combined structure of Levinson, Mcmaster and Richard implicitly teaches an emitter, characterized in that it operates at a lower temperature than the melting point of the refractory oxide (OR). (Examiner Note: melting point properties for tungsten and Refractory oxide is implied and inherent). Also see rejection in claim 29 above, the same reason to combine art as in claim 29 applies.

20 Regarding claim 50, Levinson teaches an emitter, characterized in that it is configured as a filament or planar plate structured under the wavelength of visible light (Fig.1, col. 3,lines 32-57,also see rejection in claim 32 and col.5,lines 42-60), and in that said micro-structure (R) is a two-dimensional grating of absorbing material (k>1; col.5,lines 15-60 and 43-60; see 5 in Fig.3E wherein the material is listed in col.5,lines 42-60).

21. Regarding claim 53, see rejection in claim 29 above. The same reason to combine art as in claim 29 applies wherein the method of constructing the emitter results in the emitter structure of claim 29.

Further, Levinson teaches method for constructing an emitter capable of being brought to incandescence by the passage of electric current, comprising the steps of: obtaining a filiform or laminar element of the material whereof the emitter is to be made (F), said material (Au) having a melting temperature lower than the operating temperature at which the emitter (F) is meant to be used; etching said element to form an anti-reflection micro-structure (R). (see Fig.4(A)-(D) that describes the method of etching the micro-structure from over the filiform :see col.5,line 60 to col.6,line 30). Also Richard teaches coating the emitter (F) with a refractory oxide (OR).

22. Regarding claim 54, the combined structure of Levinson, Mcmaster and Richard implicitly teaches an incandescent light source, comprising a light emitter capable of being brought to incandescence by the passage of electric current. (see rejection in claim 29 above. The same reason to combine art as in claim 29 applies).

23. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levinson (US 5152870) , in view of McMaster et al (US 2077633) and Richard (GB 2032173) further in view of Chappell (US 2603669).

Regarding claim 42, the combined structure of Levinson, McMaster and Richard teaches the invention set forth above (see rejections in Claims 29 and 31 above). The above combination is silent regarding an emitter characterized in that at least a throat or cavity (G) is provided, open on the material constituting the emitter (F)

and defined in at least one among said electrodes (H) and said refractory oxide (OR), the cavity or cavities (F) provided being operative to receive part of said material as a result of volume expansions thereof and/or to avoid delamination phenomena between said refractory oxide (OR) and said material and/or ruptures of the complex constituted by said material, said refractory oxide (OR) and said electrodes (H).

In the same field of endeavor, and towards solving the same problem of expansion of electrodes due to high temperatures, the added Chappell reference teaches an electrode (Fig.2) with a throat or cavity 11a defined in the electrodes (col.2,lines 4-25 and lines 35-55;claim 2) in order to lessen the degree of thermal stress (col.2,lines 5-20).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add an electrode with a throat or cavity, as disclosed by Chappell, in the emitter of the above combination in order to lessen the degree of thermal stress.

Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levinson (US 5152870) , in view of McMaster et al (US 2077633) and Richard (GB 2032173) further in view of Gee et al (US 20030132705).

24. Regarding Claim 47, the combined structure of Levinson, McMaster and Richard teaches the invention set forth above (see rejection in Claim 29 above). The

combination is silent regarding an emitter, characterized in that said micro-structure (R) is multi-level, i.e. it has a projection with more than two levels.

In the same field of endeavor of emitters for incandescent lamps, the added Gee reference teaches an emitter characterized in that the micro-structure (R) is multi-level, i.e. it has a projection with more than two levels (see stacked tungsten rods 370 in Fig. 3i ;also see [0009],[0014]-[0018],[0023],[0027],[0029],[0036]-[0040]) in order to selectively emit thermal radiation in the visible and near-infrared portions of the spectrum thereby enabling a more efficient incandescent lamp ([0009]).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the emitter as disclosed by Gee, in the device of the previous combination in order to selectively emit thermal radiation in the visible and near-infrared portions of the spectrum thereby enabling a more efficient incandescent lamp.

Claims 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levinson (US 5152870) , in view of McMaster et al (US 2077633) and Richard (GB 2032173) further in view of Fujishima et al (US 20020096107) .

25. Regarding Claim 51, the combined structure of Levinson, McMaster and Richard teaches the invention set forth above (see rejection in Claim 29 above, the same reason to combine art as in claim 29 applies). Further Levinson teaches the method of constructing the emitter by etching (see Fig.4(A)-(D) in Levinson that describes the

method of etching the micro-structure from over the filiform :see col.5,line 60 to col.6,line 30).

The combination is silent regarding a method for constructing an emitter capable of being brought to incandescence by the passage of electric current, comprising the steps of: a) constructing a template of porous alumina, b) infiltrating the template of porous alumina with a material destined to constitute the emitter (F), in such a way that the alumina structure serves as a mould for at least part of an anti-reflection micro-structure (R) of the emitter (F), said material (Au) having a melting temperature lower than the operating temperature at which the emitter (F) is meant to be used, c) depositing a refractory oxide (CR) onto the remaining part of the emitter (F) destined to extend between two respective terminals (H), said oxide being operative to preserve a profile of said microstructure (R) in case of deformation or change of state of the respective material (Au), consequent to the use of the emitter (F) at an operating temperature exceeding the melting temperature of said material (Au), wherein the template of porous alumina is maintained or else eliminated prior to step c).

In the same field of endeavor, the added Fujishima reference teaches a method for constructing an electron emission source (diamond ,[0004]) comprising a) constructing a template of porous alumina,([0006]-[0007],also see [0024] –[0033];also see [0037] wherein the alumina is dissolved) b) infiltrating the template of porous alumina with a material destined to constitute the emitter (F), in such a way that the

alumina structure serves as a mould in order to achieve minimized size of the electron emission source ([0005]).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the method as disclosed by Fujishima, for the device of the previous combination in order to achieve minimized (microstructure) size of the electron emission source.

Further, the previous combination does not teach depositing a refractory oxide (CR) onto the remaining part of the emitter (F) destined to extend between two respective terminals (H), said oxide being operative to preserve a profile of said microstructure (R) in case of deformation or change of state of the respective material (Au), consequent to the use of the emitter (F) at an operating temperature exceeding the melting temperature of said material (Au), wherein the template of porous alumina is maintained or else eliminated prior to step c).

Further, the Richard reference teaches depositing a refractory oxide (CR) onto the emitter (F)(also see rejection in claim 29,wherein the method of constructing results in product of claim 29).

26. Regarding claim 52, Fujishima teaches the step a) comprises the deposition of an aluminum film, with thickness in the order of one micron, on a suitable substrate and the subsequent anodisation thereof, said anodisation comprising at least: a first phase of anodisation of the alumina film; a phase of reducing the irregular alumina film obtained as a result of the first

anodisation phase ([0006]).

Regarding ,a second phase of anodisation of the alumina film starting from the residual part of irregular alumina not eliminated by said reduction phase Fujishima discloses a first step of anodization. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a second phase of anodization, since mere duplication of the essential working parts of a device involves only routine skill in the art.

Claims 55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levinson (US 5152870) , in view of McMaster et al (US 2077633) and Richard (GB 2032173) further in view of Perlo et al (US 20020145385).

27. Regarding claim 55, the previous combination teaches the invention set forth above (see rejection in Claims 29 and 54 above). The combination is silent regarding a lighting device, in particular for motor vehicles, comprising one or more light sources. In the same field of endeavor, the added Perlo reference teaches an incandescent lamp comprising a microstructure filament used for motor vehicles in order to achieve a matrix configuration for easy control of many motor vehicle functions ([0065]).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the microfilament , as disclosed by Perlo, in the microstructure emitter filament of the previous combination in order to achieve a matrix configuration for easy control of many motor vehicle functions.

28. Regarding claim 56, the previous combination teaches the invention set forth above (see rejection in Claim 29 above). The combination is silent regarding a planar matrix of micro-sources of incandescent light, each comprising a respective emitter (F).

In the same field of endeavor, the added Perlo reference teaches a planar matrix of micro-sources of incandescent light, each comprising a respective emitter (F) for the benefit of achieving flexible matrix of microfilaments integratable on a single substrate (claim 1).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the microfilament , as disclosed by Perlo, in the microstructure emitter filament of the previous combination for the benefit of achieving flexible matrix of microfilaments integratable on a single substrate.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fatima Farokhrooz whose telephone number is (571)-272-6043. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm. If

attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571) 272-2303. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fatima N Farokhrooz/

Examiner, Art Unit 2889

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